AMENDMENTS TO THE CLAIMS:

The listing of claims shown below will replace all prior versions, and listings, of claims in the Application:

1. (Amended) A method for sensing a disturbance in a transmission path of a converging ultrasound energy beam transmitted by a transducer in a focused ultrasound system, the method comprising:

transmitting a burst of ultrasound energy from the transducer, along the transmission path, to a focal zone;

detecting whether a reflected portion of the ultrasound energy burst is received at the transducer within a certain time period following transmission of the burst, wherein receipt within the time period indicates the reflected portion was reflected by a disturbance located in the transmission path proximal of the focal zone; and

determining the location of the disturbance based, at least in part, on a delay time from the transmission of the ultrasound energy burst to the reception of the reflected portions of the ultrasound energy bursts from the proximally located disturbance.

~~if the reflected portion is received at the transducer within the certain time period, analyzing the received reflected portion to determine one or more characteristics of the disturbance.~~

2. (Cancelled)

3. (Cancelled)

4. (Cancelled)

5. (Amended) The method of claim 1, [[wherein]] further comprising analyzing the received reflected portion from the disturbance and determining [[comprises determining]] an intensity of the reflected portion.

6. (Amended) The method of claim 5, further comprising determining [[wherein]] at least [[one of the]] one or more characteristics of the disturbance [[is determined]] based, at least in part, on the determined intensity of the reflected portion.

7. (Original) The method of claim 1, wherein the transducer comprises an array of transducer elements, and wherein transmitting a burst of ultrasound energy from the transducer comprises simultaneously transmitting a burst of ultrasound energy from each of the transducer elements.

8. (Amended) The method of claim 6, [[wherein]] further comprising detecting whether a reflected portion of the ultrasound energy burst is received at the transducer comprises sampling each transducer element after simultaneously

transmitting a burst of ultrasound energy from each of the transducer elements to determine which, if any, transducer element receives a reflected portion of the burst.

9. (Original) The method of claim 8, further comprising repeating each step one or more times.

10. (Amended) The method of claim 8, further comprising analyzing the received reflected portion from the disturbance and determining ~~wherein analyzing the received reflected portion comprises determining~~ a delay time from when the burst was transmitted to when the reflected portion was received at the transducer for each transducer element that receives a reflected portion of the ultrasound energy burst.

11. (Original) The method of claim 1, further comprising storing data related to a received reflected portion of the ultrasound energy burst.

12. (Previously Presented) The method of claim 11, wherein the stored data related to a received reflected portion of the ultrasound energy burst comprises at least one of a group consisting of a determined delay time from when the burst was transmitted to when the received reflected portion was received at the transducer, a determined distance from the transducer to a disturbance reflecting the respective portion back to the transducer, and a determined intensity of the reflected portion.

13. (Original) The method of claim 1, further comprising displaying information related to a received reflected portion of the ultrasound energy burst.

14. (Previously Presented) The method of claim 13, wherein displaying information comprises overlaying data related to a received reflected portion on an image of the transducer in order to indicate a portion of the transducer which received the reflection.

15. (Original) The method of claim 14, further comprising displaying the information as a single trace of data.

16. (Previously Presented) The method of claim 1, further comprising switching a transducer used to transmit the burst of ultrasound energy from continuous wave operation to burst operation before transmitting the burst of ultrasound energy, and thereafter switching the transducer from burst operation to continuous wave operation after a time period required for the burst of ultrasound energy to travel from the transducer to the focal zone and back to the transducer.

17. (Amended) A focused ultrasound system comprising:

a transducer configured to transmit a burst of ultrasound energy in a converging transmission path to a focal zone, and to received reflected portions of the ultrasound energy burst,

the system configured to analyze reflected portions of an ultrasound energy burst received by the transducer within a certain time period following transmission of the respective burst and to determine the location of a disturbance located in the transmission path proximal of the focal zone based, at least in part, on a delay time from the transmission of the ultrasound energy burst to the reception of the reflected portions of the ultrasound energy burst from the disturbance~~, wherein receipt within the time period indicates the reflected portion was reflected by a disturbance located in the transmission path proximal of the focal zone~~.

18. (Cancelled)

19. (Amended) The focused ultrasound system of claim 17 [[18]], wherein analysis of the received reflected portion comprises determining a distance from the transducer to the disturbance based, at least in part, on the determined delay time.

20. (Cancelled)

21. (Amended) The focused system of claim 17, wherein analysis of the received reflected portion comprises determining an intensity of the reflected portion from the disturbance.

22. (Previously Presented) The focused ultrasound system of claim 21, wherein analysis of the received reflected portion comprises determining a

characteristic of the disturbance based, at least in part, on the determined intensity of the reflected portion.

23. (Previously Presented) The focused ultrasound system of claim 17, wherein the transducer comprises an array of transducer elements, and wherein the system is further configured to simultaneously transmit a burst of ultrasound energy from each transducer array element.

24. (Original) The focused ultrasound system of claim 23, further configured to sample each of the transducer array elements to determine which if any received a reflection of the ultrasound energy from the disturbance in the path of the ultrasound energy.

25. (Previously Presented) The focused ultrasound system of claim 24, further configured to transmit a series of ultrasound energy bursts from each transducer array element.

26. (Original) The focused ultrasound system of claim 25, further configured to serially sample each of the transducer array elements after each transmission in the series of transmitted ultrasound energy bursts.

27. (Original) The focused ultrasound system of claim 24, further configured to determine a delay from transmission of a burst of ultrasound energy to

reception of a reflection for each transducer element that receives a reflection.

28. (Amended) The focused ultrasound system of claim 17 [[20]], further comprising a memory, wherein the system is configured to store information related to the received reflection in the memory.

29. (Amended) The focused ultrasound system of claim 17 [[20]], further comprising a display, and wherein the system is configured to display information related to the received reflection on the display.

30. (Original) The focused ultrasound system of claim 29, further configured to display the information related to the received reflection overlaid on an image of the transducer.

31. (Previously Presented) The focused ultrasound system of claim 29, further configured to display the information related to the received reflection as a single trace.

32. (Original) The focused ultrasound system of claim 29, further configured to generate a 3D reconstruction of the disturbance, and to display the 3D reconstruction on the display.

33. (Original) The focused ultrasound system of claim 17, further

comprising a controller communicatively coupled with the transducer, the controller configured to control the operation of the transducer.

34. (Previously Presented) The focused ultrasound system of claim 33, wherein the controller is configured to switch the transducer from continuous wave operation to burst operation before the transmitter transmits the burst of ultrasound energy and to switch the transducer back to continuous wave operation after a time period required for the ultrasound energy to travel from the transducer to a focal spot of the transducer and back to the transducer again.

35. (Amended) The focused ultrasound system of claim 17, further comprising a processor, wherein the processor determines the [[delay and the]] range from the transducer to the disturbance that generated the reflection.

36. (Previously Presented) The focused ultrasound system of claim 35, wherein the processor determines the phase and amplitude of the received reflection.

37. (Previously Presented) The focused ultrasound system of claim 36, wherein the transducer comprises an array of transducer elements, and wherein the processor determines the phase and amplitude of the received reflection relative to each transducer array element.

38. (Previously Presented) The focused ultrasound system of claim 35, further configured to analyze the integrity of the burst of ultrasound energy transmission path.